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See page 6-9

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/081,327A

DATE: 07/25/2002
TIME: 08:42:12

Input Set : A:\SEQUENCE 081,327.txt
Output Set: N:\CRF3\07252002\J081327A.raw

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 3 <110> APPLICANT: Huang, Tim Hui-Ming
 5 <120> TITLE OF INVENTION: HIGH-THROUGHPUT METHODS FOR DETECTING DNA METHYLATION
 7 <130> FILE REFERENCE: 40629-2
 9 <140> CURRENT APPLICATION NUMBER: US 10/081,327A
C--> 10 <141> CURRENT FILING DATE: 2002-07-11
12 <150> PRIOR APPLICATION NUMBER: 09/497,855
13 <151> PRIOR FILING DATE: 2000-02-04
15 <150> PRIOR APPLICATION NUMBER: 60/120,592
16 <151> PRIOR FILING DATE: 1999-02-18
18 <150> PRIOR APPLICATION NUMBER: 60/118,760
19 <151> PRIOR FILING DATE: 1999-02-05
21 <160> NUMBER OF SEQ ID NOS: 54
23 <170> SOFTWARE: PatentIn version 3.1
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26 <211> LENGTH: 630
27 <212> TYPE: DNA
28 <213> ORGANISM: Homo sapiens
30 <220> FEATURE:
31 <221> NAME/KEY: misc_feature
32 <222> LOCATION: (1)..(630)
33 <223> OTHER INFORMATION: All n's are unknown
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W--> 39 ataaaacaaa actttaccna tcgtatttgg gtgaggggct ggggaatgga taactgtttc     120
W--> 41 ctctgctaaa attttagcgt ntnaatcggg ggatngagat ttgcataagt ttgacgggag     180
W--> 43 ggtcntgtnt tcgtttcaag tatgggtnat tgtccacacc ttttcttnaa gantngcgcg     240
W--> 45 gggggcctaa ttcgaanggt naanaaaana aggaagacng angtgccana atgnaccccca     300
W--> 47 atccacanct tatggganan ctcccaacgc gttngatgca aacttgaatn tcnntactnt     360
W--> 49 ccctaaatn ncttggngtt atcntggccn aactgtttcc tgtnttaaaa tnnttanccg     420
W--> 51 ctccccattc cnctctannt acnaanccgg aagcttnaat tttnaannccc nggggtncct     480
W--> 53 aatganttaa ctaacccct tanttncctt nnncccngc ccgnttcnat ccggaaactn     540
W--> 55 ttttcccct ncnnttatta atccnccncc cccggaaaan gcggttgctt tntgggccct     600
W--> 57 nccctcctcc caatgancc cncccggntt                                         630
60 <210> SEQ ID NO: 2
61 <211> LENGTH: 913
62 <212> TYPE: DNA
63 <213> ORGANISM: Homo sapiens
65 <220> FEATURE:
66 <221> NAME/KEY: misc_feature
67 <222> LOCATION: (1)..(913)
68 <223> OTHER INFORMATION: All n's are unknown
71 <400> SEQUENCE: 2
W--> 72 cccgacgtcg catgctnccg gccgccatgg ccgcgggata tcactagngc ggccgcctgc      60
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RAW SEQUENCE LISTING
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Input Set : A:\SEQUENCE 081,327.txt
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W--> 74  aggtcgacca taaggagnca ccagctcgcc ccacttcacc tncggcggng ctggacacga    120
     76  gctgggcgct ataatctgca gaacgtcccg ggccgaaaag gatgggaac  acacctggag    180
W--> 78  ccagggcgaa gacatctaga gatgcaaagg gaatggaaga aaacccggnt aggttctctc    240
W--> 80  agagcaagac ccctttgctg gaaacatagg nttctaagcc cggtgggtgg gagcaacagg    300
W--> 82  gtgggagaac tnagactnca gcctgaactt agcgctnccc caccttgctn cccatnaaga    360
W--> 84  tcccgtattt ggcaggtcca gaccccgcca aacttcaaga ncccggcggt agggacaggc    420
W--> 86  aaacttgcag cgacangggg gacccgaacg gnaccccca  ggaggggaan aaggggcngg    480
W--> 88  agatcagacc gttggtgnng gtngaatngg gcnaaattnt ttnnaacaca cntggtggng    540
W--> 90  tggaaccttn aatccttttn tagnctcnct tgncttgcac ctntnttagn ggggaaatcc    600
W--> 92  cctggggngn tnntnncttt gcntngccaa ntgggngggtn ngtnngnntt ttnttccatn    660
W--> 94  ntnntngggt tggccngatg tggggnntnt ttccngnttn ncngngnctt tttggggnnn    720
W--> 96  aanatngncn ttattntggn ggaaananaa agcttggnaa ttttttgggg aaanttgnnn    780
W--> 98  ccnncngggt nggnaangnn ttntttnttg nngntctant ncgntnnggt ccnttttnnc    840
W--> 100 cngttnngng ngaggtnccc nnccnnnggn ngccttnggt tggggatttt tttggggcnc    900
W--> 102 ctgngnngtt tgg                                                        913
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     106 <211> LENGTH: 952
     107 <212> TYPE: DNA
     108 <213> ORGANISM: Homo sapiens
     110 <220> FEATURE:
     111 <221> NAME/KEY: misc_feature
     112 <222> LOCATION: (1)..(952)
     113 <223> OTHER INFORMATION: All n's are unknown
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W--> 119 anggccgcct ttatatcacn agggcggccc gcctncaggt cgaccataat tccatcccag    120
W--> 121 gccatttcct tcctccgggg gtcttttnta aaaganctcc ggnaccncct cccccatccc    180
W--> 123 tggagttgnt tctgcgcgga acttanccct ggggagagga ngtagcccgg nctgtgaccc    240
W--> 125 cggccttttcg ganngtgntc tgcgtntcct tactggcccc tccccttgtc ttccagatac   240
W--> 127 cctgtgtaac naactcgacc agnancggaa ggcgccgtta tgcatccagc anaaattgaa    360
W--> 129 aggtgcggaa ccggnaaaca aagatangag ggntnctgng tgccngccgt nctgcnactg    420
W--> 131 aatgaatgaa tagtgngact agtgaggaag nccaccatcc acngnggatc angatgtntg    480
W--> 133 anngataaaa ntggnaactg attttattgn gagagctccc aacgcattgg atgcatagct    540
W--> 135 tngagtatct ataagnnnca cctaaataac ttgaccnaat catgggcaat aactggnncc    600
W--> 137 tgtgngaaan tgnnatccct naccaanccn cacaacatnc taccccnaaa ccataaaagt    660
W--> 139 gtaaaaaccn tggggttccc caatnnantg aaccaacctc ncantnaatt nccntnncnc    720
W--> 141 ctcacncancc ccttttcnaa ccnnaaaacc cttcntaccc actncattaa atgaancncc   780
W--> 143 cacccccct  aaaaancccn ntttncaaat tngncccct  tnccnccntc ctntanntan    840
W--> 145 tnnactccna tanctcngnc ctatcntntt tcnnannaac nnnatcaanc tnanncaaaa    900
W--> 147 ncnaaaannc cnnattcccc naaacccnan gaaaccccnn taaaaaacan tt             952
     150 <210> SEQ ID NO: 4
     151 <211> LENGTH: 1059
     152 <212> TYPE: DNA
     153 <213> ORGANISM: Homo sapiens
     155 <220> FEATURE:
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     157 <222> LOCATION: (1)..(1059)
     158 <223> OTHER INFORMATION: All n's are unknown
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Input Set : A:\SEQUENCE 081,327.txt
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W--> 162 gnnnnnttga anccettnag anccggnccc gacgtcncat gctcccggcc gcctggccgc      60
     164 gggatatcac tagtgcggcc gcctgcaggt cgaccataat gagttgtagc aaatccacac     120
     166 tttgtagttg ggaggaggag agctggtggc caatgtttgt ccaactgttt attttttcgag    180
     168 acccagccta ttgaggaagg cttgttcaag caggcttcgt tcctacaaac acacaaacat     240
     170 ccttctgttt gcctacaaag aaaaggggac cagcgctgga tttgcatgcg aatgaggagc     300
     172 cccgggagga gacgtccttg cccatcaaag gccgcggtag cctggcggcc ctcagccttt     360
     174 gttccagcac ctgctcgcct gcacggcctg acggggccgc gccccgcgct cctggctcgc     420
     176 ccatccaggg tccacggctc actcgtccct cgcctgcccc gcggccacac ctctcgcagc     480
     178 tcatacctca cccgccccgc ggccctgctt cccccagtct catcctctcg ggagcaggcc     540
W--> 180 cgcagggtct gcaaggccaa gaacggaacc ccaaacgcan agggtgggga ggtgagccgg     600
     182 caggacgcaa aactcggaat cgaggcggct tgggtttaca cgttccttta ctctggctca     660
     184 cgctggtctt cacctggtta tgggagagct tcccaacgcg ttggatgcat aacttgagta     720
W--> 186 ttctatagtg gcacctaaat aagctttggc gtaaacatgg gcatanctgg nttcctgngt     780
W--> 188 gaaattggta tccgnttcac aattccccac aacataacaa gcccggaagc nttaaagngg     840
W--> 190 aaaagctggg gtgcctaatg agggactnac tcacattaat tgcgntgggc ttacttgccc     900
W--> 192 nttttccaan cgggnaaaac tttcgngcca acttgcattt aatgaatcgg caaanccccg     960
W--> 194 ngnanaggcg ntttgngnaa tgggcctttt cccttcttgg ttnnttaatn nntnggntng    1020
W--> 196 gccnttggtt nngcaacggg ntaantantn aaagggggg                           1059
     199 <210> SEQ ID NO: 5
     200 <211> LENGTH: 895
     201 <212> TYPE: DNA
     202 <213> ORGANISM: Homo sapiens
     204 <220> FEATURE:
     205 <221> NAME/KEY: misc_feature
     206 <222> LOCATION: (1)..(895)
     207 <223> OTHER INFORMATION: All n's are unknown
     210 <400> SEQUENCE: 5
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W--> 213 accataaata tagagccaaa ccgtccaccc agccgtggcg cgaatctctt gncccccaac     120
     215 tctcaagtgt cctttggctc tggagctcct gggcccgggt tccgcatccg ggaggagaaa     180
W--> 217 ggagcgagcg cgcacggtgc ctcccgaggg cagggagcan aggagaggaa aggggaagac     240
W--> 219 tatgaaacgt nctaactaat gcgcgtactg aatgcgcatt cacgtggtca gttaccgatg     300
W--> 221 tgcttctctc tctcctggcc cgcagggaca gagcgcgcca gggacgtgcc agccccggnc     360
W--> 223 ccggctctgc acatttacta tgtgacctcc tgnagtcatt ctctctccca gtcctagatg     420
     225 agatcttaga gctcacgcaa gcttgcctg tggaacagac taagtatctg actttgcggg     480
W--> 227 gatgtcctga tgcccatcna aggacagaaa tcttggacac ttgcggatgn gctttatggg     540
W--> 229 agaagctcca acgccgttgg atgcatagct ttgggnattc tatagngcac ctnnatagct     600
W--> 231 ttggcgnaan tcatggncat ngntggnttn ctgngggaaa tggtatccgg ttacaatttc     660
W--> 233 acacaacata caacccggaa gcantaaagt ngtaaagcct gggtgcccaa tnggggggng     720
W--> 235 ctaanttcca ttaattgggg tggcncannt gccgntttca gtcggggaaa acctggntgg     780
W--> 237 ccanctggnt tnttggnnnt ggccannccc ggggagaggn ggntttggga anttggnngn     840
W--> 239 tntttcgctt nctggttnct gagttcgtng ggttgggcct ttcggntggg gnang          895
     242 <210> SEQ ID NO: 6
     243 <211> LENGTH: 900
     244 <212> TYPE: DNA
     245 <213> ORGANISM: Homo sapiens
     247 <220> FEATURE:
     248 <221> NAME/KEY: misc_feature
     249 <222> LOCATION: (1)..(900)
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RAW SEQUENCE LISTING
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DATE: 07/25/2002
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Output Set: N:\CRF3\07252002\J081327A.raw

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        258 actgaggcga agaccgcgcc ccggagtgtg ggccgccttc ccagtaaatc tgcttatgag   180
W--> 260 aggaagtgat ggaccagatg ctcaaggggt agggactaga ttttgcctta canaggacaa   240
W--> 262 gtcagtctct gaagagaagt cgcggagagg gacgcanaac gcagtgggac ggaanggtct   300
        264 cggggaaagt gggcttgcgc agaagtgcca gggagctcgt gggaagtgca gagagccgct   360
        266 gggattcggc caggaaaagc gagagtgcgc gaacaagctt cacagaaatg gccttatggg   420
W--> 268 agaactccca acgcgttgga tgcntagctt gantatctat agtgtcccct aaatacttgg   480
W--> 270 cgtaatcatg gtcatanctg tttcctgtgt taaattgtta tccgctcncn attccccgca   540
W--> 272 cctacgaacc ngaaacctaa ntntaaacct ggggtgctaa taattancna actcccatta   600
W--> 274 attgcnttgc cnncctgccc ctttccatcg ggaaaccgtc ttccacttcn ttaatgaatc   660
W--> 276 gccccccccg gaaaagggtt gcttttnggg ccttccnttc cccctaatc ctgnccngcn   720
W--> 278 tcggtncggn acgttcctcc ccaggngtat tcgtttccga acngggnccc gaaanntnac   780
W--> 280 aagcctnagg cgacctnaag gcntncngnt tccnggnccc ccganancccc aatnacccctt   840
W--> 282 ttagnggaac cccggntaaa accggttncc gaaccccttg ctnnttcccc ccntagnaan   900
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        286 <211> LENGTH: 730
        287 <212> TYPE: DNA
        288 <213> ORGANISM: Homo sapiens
        290 <220> FEATURE:
        291 <221> NAME/KEY: misc_feature
        292 <222> LOCATION: (1)..(730)
        293 <223> OTHER INFORMATION: All n's are unknown
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W--> 299 cctgcaggtc gaccataana tcatttgcat cacatttaca tccatccctg ggccttggag   120
W--> 301 gttgagggtg gtcccttggg tcccaagaga agctgcccct cagaggctct canancccan   180
W--> 303 gggacggggg ggtggagccc gttgcacagt catgcantgc anctggggca ggaagcgaga   240
W--> 305 gtgaggaggg gggaggccac agcccgcgga ngcaaggcgg gtgcagggct tctggggacc   300
W--> 307 gagggaggtg ccagaagttg agccctgaag ccctgctggc ccctgggcgc aggcccanct   360
W--> 309 caggccccca nggattngac tcctgnacct gacattttcn atanaaaacc cccgggaccc   420
W--> 311 ctataacctc tccccggntg gttgncggcc ttttgggnaa ttnttttttt gaaaaccccc   480
W--> 313 nccccttggg atccaactgn atttnctttta ttttccccca aaactngggt tnnccagncc   540
W--> 315 aaccnttttcc cttttaaaat ttttnccccc cccnttcccc ccnctnnaac ccccanaana   600
W--> 317 nttttttnccc cnggnntncc naaaatcanc ccccattttt tnccccccccc ccnnctcngg   660
W--> 319 aaanttttttc tctntttttta tntcccccccg gaaaaaaggn ttttntnccc cccccnaac   720
W--> 321 accnttttcc                                                          730
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        325 <211> LENGTH: 925
        326 <212> TYPE: DNA
        327 <213> ORGANISM: Homo sapiens
        329 <220> FEATURE:
        330 <221> NAME/KEY: misc_feature
        331 <222> LOCATION: (1)..(925)
        332 <223> OTHER INFORMATION: All n's are unknown
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RAW SEQUENCE LISTING
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DATE: 07/25/2002
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Input Set : A:\SEQUENCE 081,327.txt
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      338 tcactagtgc ggccgcctgc aggtcgacca taatccctac accaaccctg ccagggaggt    120
W--> 340 tttctaangg cattttacag atgagcaaac tgtaccagcc agagtctcca aagcgcgggc    180
W--> 342 accccacact gnttnctnct tggcggnggg tggggggtct cttagagggg gtaagagcac    240
W--> 344 caggagcccc aggcagcccc gnctnccact ctggctgccg ggaccgtncc ggagccacgt    300
W--> 346 ccctncccaa aggaggcccc ttacctgcgg gggcacctnc cgggcgcctc gcgtgtcggg    360
W--> 348 cccaaagcca ccgaggctgg gagccgctgg ctatactcgg tctctnctct gcccgncggc    420
W--> 350 ccccgagctn ctactgcang cgggcccgct gcctnttctt ggttcnnctt gctagngccc    480
W--> 352 cncngctgan ggccccatna ncnntnccgg aggagggagg gaggccgctt ggtggccnga    540
W--> 354 ggcggcggtt ntattgctta cttgnctngg ggggtggggg nntctnagan tgggtcnanc    600
W--> 356 tnnntgggnn ggcttnctnn gtngnnnnccn ctaangnggg gngcatttnt tgcnnnngga    660
W--> 358 nnngcnnccn nngnggggnt ttnnnnnaan gtttttttgt ctgannnnca agcantngnn    720
W--> 360 tgganttant ttgnggnggg angnnnccnc nacnnggnnn gtanngnttg nnnnagtttt    780
W--> 362 tnnnagggnc cnnanagnan ggnnngngnn nngntgatng ngnttgcnnt ngntaggntn    840
W--> 364 gnnntncgnt tnnnnatgnn ntnnatnatn nnnggcnnna nntgngnagg gngatncntt    900
W--> 366 ngngnctnnt gtngngntnt ttcng                                              925
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      370 <211> LENGTH: 1047
      371 <212> TYPE: DNA
      372 <213> ORGANISM: Homo sapiens
      374 <220> FEATURE:
      375 <221> NAME/KEY: misc_feature
      376 <222> LOCATION: (1)..(1047)
      377 <223> OTHER INFORMATION: All n's are unknown
      380 <400> SEQUENCE: 9
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      383 gcggccgcct gcaggtcgac cataactctc gaggtttcct ctttcccac ctcatactgc     120
      385 tagccctgac gtgaggggat agggtgcctg tcgccgtatt cccatgtaga tacgacagat    180
      387 ggaacgtaac tgcggttggc caggggctcc gcagtggctg gggcgccgga gtgcgctgct    240
      389 ctgactttcc ggtgccgggc tcctgctcca ggctggaaat gtgctcctag ctctcctagg    300
      391 gggacctgga cctaggggag gagattgggc ggagcccgcg gagtgtgccc aaccatggca    360
      393 ccaccgtggg cctggtctcc tgcgagcgct ccgggctgtc cctgccggtg catcggggtt    420
      395 ccacgtcctg gggagagacg aagatgccct gggaaagata aacagccaag ttttgtcccc    480
      397 ggaggaaaga agcttggacc tggtccctgt gtctgctgcg gggagggcca ggggataagt    540
      399 gcgggtgcct gcccgcctcc cttgtagaac ttggcgtctc gcacctttta taaacgccag    600
W--> 401 gatccgaggc cagaagttag ntggtggcca ggntagctgc tgaatgggtt gtggangaca    660
W--> 403 aggangtgga tgctggccag ggaagatgtg cttgtcaggt angtacttcg gacaagaaga    720
W--> 405 actntggccc ctgaggaaga acagaaccca aggcacttct ggagcaattt ctggcntggg    780
W--> 407 gtgataaaag gaacttgttt tnaggcnaga cacatnctta tgggagaact tcccaacgcc    840
W--> 409 gttggatcat aactttgaga ttctataagg gcccctaaaa aantttggcg gaaannatgg    900
W--> 411 gcaaaanttg ttcccggggg aaatngtann ccntttacaa attnccncaa cntncgancc    960
W--> 413 cgaaccttaa anggnaaanc ccgggggggcc taangngnga nctaactccc attaaatggn   1020
W--> 415 nnggcnnnat ngcccntttt caanncg                                          1047
      418 <210> SEQ ID NO: 10
      419 <211> LENGTH: 634
      420 <212> TYPE: DNA
      421 <213> ORGANISM: Homo sapiens
      423 <220> FEATURE:
      424 <221> NAME/KEY: misc_feature
      425 <222> LOCATION: (1)..(634)
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               RAW SEQUENCE LISTING ERROR SUMMARY        DATE: 07/25/2002
               PATENT APPLICATION:  US/10/081,327A       TIME: 08:42:13

                    Input Set : A:\SEQUENCE 081,327.txt
                    Output Set: N:\CRF3\07252002\J081327A.raw
```

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

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Seq#:1; N Pos. 8,79,141,143,155,185,189,208,228,233,235,257,261,264,269,279
Seq#:1; N Pos. 282,289,294,308,318,320,334,350,353,354,359,370,371,377,384
Seq#:1; N Pos. 390,404,412,413,417,432,438,439,443,446,457,464,467,468,471
Seq#:1; N Pos. 477,486,503,506,511,512,513,518,524,528,540,551,553,554,565
Seq#:1; N Pos. 568,580,592,601,617,622,628
Seq#:2; N Pos. 17,48,78,102,109,229,271,312,318,337,350,356,401,436,452,470
Seq#:2; N Pos. 478,498,499,503,508,513,519,523,524,532,539,550,560,564,568
Seq#:2; N Pos. 573,583,585,590,608,610,612,613,615,616,623,625,631,636,640
Seq#:2; N Pos. 641,644,645,647,648,653,660,661,663,664,666,676,686,687,689
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Seq#:2; N Pos. 740,746,748,758,774,778,779,780,783,784,786,791,794,797,799
Seq#:2; N Pos. 800,803,807,811,812,814,819,821,824,826,827,833,838,839,842
Seq#:2; N Pos. 846,847,849,851,857,861,862,865,866,867,870,871,877,899,904
Seq#:2; N Pos. 906,907
Seq#:3; N Pos. 1,4,8,15,18,29,30,43,62,80,95,148,156,163,167,189,206,221
Seq#:3; N Pos. 231,253,254,258,266,311,323,325,352,375,387,393,395,399,405
Seq#:3; N Pos. 411,416,436,451,463,465,472,478,482,483,491,495,510,542,556
Seq#:3; N Pos. 557,558,577,597,598,605,610,613,614,621,627,630,639,647,670
Seq#:3; N Pos. 685,686,688,701,704,706,711,714,716,717,719,726,728,738,743
Seq#:3; N Pos. 744,755,764,776,778,796,800,801,805,812,814,822,825,828,833
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Seq#:3; N Pos. 881,882,883,889,892,894,895,901,903,908,909,912,913,921,928
Seq#:3; N Pos. 930,939,940,950
Seq#:4; N Pos. 2,3,4,5,6,12,18,22,27,37,580,766,771,778,795,831,838,868,885
Seq#:4; N Pos. 901,910,915,926,955,961,963,965,971,976,978,1003,1004,1010
Seq#:4; N Pos. 1011,1012,1014,1017,1019,1024,1031,1032,1041,1045,1048,1050
Seq#:5; N Pos. 3,112,220,251,359,393,499,530,576,586,593,594,607,610,617
Seq#:5; N Pos. 621,623,627,630,634,684,691,712,719,725,745,748,749,755,777
Seq#:5; N Pos. 784,789,792,797,798,799,806,807,820,823,832,837,838,840,842
Seq#:5; N Pos. 851,858,869,886,892,894
Seq#:6; N Pos. 80,107,233,277,295,444,453,497,528,530,551,561,563,587,589
Seq#:6; N Pos. 606,612,613,650,687,697,714,717,720,726,730,746,763,767,775
Seq#:6; N Pos. 776,778,787,797,803,805,807,809,814,817,825,827,834,845,856
Seq#:6; N Pos. 868,883,884,893,897,900
Seq#:7; N Pos. 2,15,79,173,175,180,217,222,271,358,371,377,386,400,404,438
Seq#:7; N Pos. 445,458,463,481,500,505,526,532,533,538,545,565,574,586,587
Seq#:7; N Pos. 596,599,601,607,612,615,616,618,621,629,642,653,654,658,664
Seq#:7; N Pos. 674,682,700,705,707,717,724
Seq#:8; N Pos. 10,11,14,23,29,35,40,128,192,195,198,207,262,265,288,305,339
Seq#:8; N Pos. 406,416,430,439,455,466,467,476,482,484,490,499,501,503,504
Seq#:8; N Pos. 506,538,551,565,568,581,582,586,590,597,599,602,603,604,609
Seq#:8; N Pos. 610,616,619,620,623,625,626,630,635,637,642,649,654,655,656
Seq#:8; N Pos. 657,661,662,663,666,670,671,672,674,679,683,684,685,686,687
Seq#:8; N Pos. 690,705,706,707,708,715,717,719,720,725,729,734,737,742,744
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 07/25/2002
PATENT APPLICATION: US/10/081,327A   TIME: 08:42:13

Input Set : A:\SEQUENCE 081,327.txt
Output Set: N:\CRF3\07252002\J081327A.raw

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Seq#:8;  N Pos. 745,749,751,754,755,758,759,760,764,765,767,771,772,773,774
Seq#:8;  N Pos. 782,783,784,792,793,795,798,800,803,804,805,807,809,810,811
Seq#:8;  N Pos. 812,814,819,821,823,828,829,831,833,838,840,842,843,844,846
Seq#:8;  N Pos. 849,852,853,854,855,859,860,861,863,864,867,870,871,872,873
Seq#:8;  N Pos. 877,878,879,881,882,885,887,892,896,898,901,903,905,908,909
Seq#:8;  N Pos. 913,915,917,919,924
Seq#:9;  N Pos. 6,9,23,621,633,656,665,702,724,776,802,807,816,883,895,896
Seq#:9;  N Pos. 907,925,929,930,933,944,947,952,954,958,972,975,979,994,996
Seq#:9;  N Pos. 998,1001,1020,1021,1022,1026,1027,1028,1031,1036,1044,1045
Seq#:10; N Pos. 29,40,56,115,123,129,157,206,220,247,262,272,281,283,313
Seq#:10; N Pos. 323,334,358,359,361,365,372,379,387,404,411,442,447,463,466
Seq#:10; N Pos. 488,489,512,513,515,516,524,526,529,530,542,550,564,569,570
Seq#:10; N Pos. 574,577,584,600,602,606,610,611,628,632
Seq#:11; N Pos. 2,38,51,79,80,83,85,88,92,106,112,115,134,135,150,190,208
Seq#:11; N Pos. 213,215,218,250,254,278,279,328,339,363,389,393,394,406,408
Seq#:11; N Pos. 417,419,421,428,433,440,441,444,447,451,459,467,469,470,472
Seq#:11; N Pos. 475,483,485,495,503,505,519,531,538,542,551,552,566,573,584
Seq#:11; N Pos. 587,600,601,605,609,612,614,618,619,621,623,624,628,630,636
Seq#:11; N Pos. 638
Seq#:12; N Pos. 3,73,106,147,170,221,236,260,352,360,364,372,380,437,459
Seq#:12; N Pos. 461,478,483,489,502,507,508,535,536,538,549,562,571,580,585
Seq#:12; N Pos. 599,601,602,605,606,615,632,647,648,669,678,682,706,707,712
Seq#:12; N Pos. 727,740,744,745,750,752,754,755,759,760,762,763,765,767,770
Seq#:12; N Pos. 774,776,780,786,787,792,805,807,814,832,838,840,849,850,857
Seq#:12; N Pos. 858,867,872,873,875,876,879,885,886,900,901,906,909,913,920
Seq#:12; N Pos. 929,930,934,935,938,940,943,949,950,951,959,966,968,969,973
Seq#:12; N Pos. 978,983,986,987,991,994,1003,1005,1006,1010,1017,1019,1020
Seq#:12; N Pos. 1021,1024,1026,1027,1030,1033,1037,1041,1044,1045
Seq#:13; N Pos. 132,147,173,188,190,196,198,213,235,261,268,293,297,312,325
Seq#:13; N Pos. 337,340,353,400,418,424,430,431,444,446,476,479,481,518,522
Seq#:13; N Pos. 539,542,555,569,572,576,579,600
Seq#:14; N Pos. 33,74,121,145,165,170,179,182,185,197,203,206,226,238,256
Seq#:14; N Pos. 271,279,299,300,310,317,326,331,343,347,367,377,381,387,390
Seq#:14; N Pos. 410,415,417,418,423,435,438,440,443,450,451,455,460,478,487
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Seq#:14; N Pos. 544,549,552,555,559,561,563,569,584,587,588,596,599,600,602
Seq#:14; N Pos. 608,609,611,617,619,625,632,635,636,640,651,655,657,664,665
Seq#:14; N Pos. 675,680,685,687,689,690,693,694,708,713,719,723,724,730,732
Seq#:14; N Pos. 736,737,740,742,745,746,748,750,754,758,760,767,773,774,777
Seq#:14; N Pos. 778,780,781,783,787,791,795,800,803,811,812,813,818,824,825
Seq#:14; N Pos. 832,834,836,839,844,846,848,851,858,859,860,863,869,870,871
Seq#:14; N Pos. 872,873,877,880,884,885,895,896,901,902,904,909,910,913,915
Seq#:14; N Pos. 916,919,920,923,924,927
Seq#:15; N Pos. 5,202,212,242,247,254,255,256,275,292,305,307,319,332,336
Seq#:15; N Pos. 341,384,385,398,420,429,447,448,451,452,458,464,472,485,488
Seq#:15; N Pos. 490,503,506,516,528,533,542,544,550,559,563,567,575,584,598
Seq#:15; N Pos. 600,608,609,612,617,621,624,625,630,633,649,656,657,658,663
Seq#:15; N Pos. 665,666,673,677,678,684,696,697,712,715,716,717,719,729,731
Seq#:15; N Pos. 734,738,741,742,743,744,770,771,787,788,789,790,792,794,795
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 07/25/2002
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Input Set : A:\SEQUENCE 081,327.txt
Output Set: N:\CRF3\07252002\J081327A.raw

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Seq#:15; N Pos. 796,797,798,799,802,804,810,811,813,816,818,819,822,826,831
Seq#:15; N Pos. 832,834,835,838,846,848,857,858,861,867,869,873,874,877,881
Seq#:15; N Pos. 883
Seq#:16; N Pos. 91,411,472,485,503,528,537,542,544,550,565,566,573,603,613
Seq#:16; N Pos. 644,657,659,665,669,673,692,701
Seq#:17; N Pos. 3,44,117,129,130,185,220,346,352,379,400,402,415,419,473
Seq#:17; N Pos. 497,503,512,518,537,544,545,559,578,613,619,637,641,643,652
Seq#:17; N Pos. 655,660,670,675,679,683,684,689,696,698,703,706,709,712,714
Seq#:17; N Pos. 721,727,732,735,743,745,750,766,771,790,791,792,795,801,803
Seq#:17; N Pos. 806,807,809
Seq#:18; N Pos. 2,5,29,30,70,81,82,85,90,91,93,95,112,167,172,175,184,225
Seq#:18; N Pos. 231,239,240,255,260,261,270,273,275,301,304,317,335,351,367
Seq#:18; N Pos. 376,379,386,388,390,394,395,396,398,400,403,406,411,422,425
Seq#:18; N Pos. 430,434,438,447,458,465,467,469,470,475,481,482,496,505,515
Seq#:18; N Pos. 516,518,525,531,537,540,550,555,556,557,559,561,582,600,602
Seq#:18; N Pos. 603,606,619,621,624
Seq#:19; N Pos. 5,11,22,36,43,78,108,117,118,142,166,167,169,178,199,208
Seq#:19; N Pos. 210,212,225,227,235,241,250,259,263,279,300,314,319,320,332
Seq#:19; N Pos. 336,344,346,358,364,369,372,383,386,397,401,415,421,430,433
Seq#:19; N Pos. 434,441,463,465,474,481,482,511,518,520,525,527,530,535,538
Seq#:19; N Pos. 554,555,559,563,568,576,586,592,593,604,607,613,628,639,644
Seq#:19; N Pos. 650
Seq#:20; N Pos. 6,103,129,159,191,306,335,345,378,380,395,407,426,454,461
Seq#:20; N Pos. 463,468,471,506,509,510,525,564,570,572,574,578,584,600,613
Seq#:20; N Pos. 621,624,634,635,645,651,658,664,669,674,678,679,680
Seq#:21; N Pos. 1,2,8,9,16,17,18,19,20,21,229,271,311,317,398,410,415,421
Seq#:21; N Pos. 423,429,433,440,453,457,462,476,478,480,496,500,511,512,513
Seq#:21; N Pos. 514,517,520,529,534,535,546,547,550,554,558,570,573,574,587
Seq#:21; N Pos. 598,599,602,609,611
Seq#:22; N Pos. 6,7,12,22,25,30,32,56,60,111,114,125,136,138,143,194,202
Seq#:22; N Pos. 234,248,266,291,311,312,329,333,342,344,372,374,382,388,393
Seq#:22; N Pos. 400,404,416,444,448,449,455,467,482,488,497,507,508,509,518
Seq#:22; N Pos. 526,527,530,532,533,534,546,552,556,562,567,570,577,594,595
Seq#:22; N Pos. 597,609,610,618,619,621,626,630,642,643,645,648,650,652,661
Seq#:22; N Pos. 672,673,676,681,685,687,690,694,697,699,702,706,712,716,718
Seq#:22; N Pos. 722,726,730,731,734,741,743,744,747,753,761,762,767,769,770
Seq#:22; N Pos. 771,773,774,784,787,797,802,804,810,833,837,839,840,843,845
Seq#:22; N Pos. 849,850,853,860,861,868,871,876,877,885,886,892,893,894,899
Seq#:22; N Pos. 900,915,920,923,932,940,952,959,963,965,972,977,990,992,996
Seq#:22; N Pos. 998,999,1004,1013,1017,1019,1021,1026,1029,1030,1034,1035
Seq#:22; N Pos. 1039,1040,1058,1060,1061,1062,1064,1068,1074,1075,1077,1078
Seq#:22; N Pos. 1080,1087,1088,1091,1095,1096,1101,1108,1116,1132,1141,1147
Seq#:22; N Pos. 1149,1150,1157,1158,1164,1165
Seq#:23; N Pos. 11,13,58,100,178,184,209,224,300,351,374,426,440,455,477
Seq#:23; N Pos. 496,510,523,527,531,547,549,554,568,569,578,582,595,602,606
Seq#:23; N Pos. 616,618,624
Seq#:24; N Pos. 1,4,7,8,9,13,15,16,17,21,64,66,67,68,69,70,76,77,84,101,106
Seq#:24; N Pos. 112,137,146,151,171,184,190,192,241,251,252,256,258,274,296
Seq#:24; N Pos. 304,306,325,329,341,343,372,399,417,435,438,443,467,471,474
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 07/25/2002
PATENT APPLICATION: US/10/081,327A   TIME: 08:42:13

Input Set : A:\SEQUENCE 081,327.txt
Output Set: N:\CRF3\07252002\J081327A.raw

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Seq#:24; N Pos. 501,508,510,527,547,548,557,558,564,566,568,575,583,589,591
Seq#:24; N Pos. 595,599,601,602,604,609,610,614,616,617,618,624,627,640,652
Seq#:24; N Pos. 657,659,663
Seq#:25; N Pos. 48,78,184,212,282,293,376,398,414,429,442,466,470,473,486
Seq#:25; N Pos. 491,514,519,525,541,544,550,572,598,605,626
Seq#:26; N Pos. 372,418,420,433,452,474,487,493,498,514,535,549,554,556,559
Seq#:26; N Pos. 566,567,569,583,586
Seq#:27; N Pos. 251,278,322,334,340,356,357,367,370,401,413,414,420,432,441
Seq#:27; N Pos. 447,452,453,458,459,462,489,497,504,510,515,519,530,536,540
Seq#:27; N Pos. 544,545,557,559,560,564,577,581,582,583,589,596,597
Seq#:28; N Pos. 19,35,73,76,82,135,206,209,213,215,217,236,238,245,247,256
Seq#:28; N Pos. 267,281,292,300,308,331,356,358,363,378,406,410,412,418,422
Seq#:28; N Pos. 440,471,475,477,485,513,516,551,561,564,572,580,610
Seq#:29; N Pos. 3,74,171,187,203,258,265,282,294,297,300,307,315,340,355
Seq#:29; N Pos. 360,367,373,374,386,392,401,427,432,433,439,441,449,457,458
Seq#:29; N Pos. 476,480,493,496,497,504,509,517,523,526,527,533,543,551,552
Seq#:29; N Pos. 554,556,558,563,564,565,570,576,577,579,581,582
Seq#:30; N Pos. 1,3,9,10,18,20,21,183,287,386,413,418,421,434,438,442,452
Seq#:30; N Pos. 456,458,463,468,469,473,475,496,505,506,511,529,533,535,537
Seq#:30; N Pos. 539,540,544,545,547,554,562,570,571,577,582,584,585,590,592
Seq#:30; N Pos. 598,599,600,609,614,618,620
Seq#:33; N Pos. 45,64,139,140,175,191,220,229,238,246,265,292
Seq#:34; N Pos. 182
Seq#:35; N Pos. 140,183
Seq#:36; N Pos. 59,104,168,193,219,239,250,266,284
Seq#:41; N Pos. 49,112,135,159
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VERIFICATION SUMMARY   DATE: 07/25/2002
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Input Set : A:\SEQUENCE 081,327.txt
Output Set: N:\CRF3\07252002\J081327A.raw

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L:10  M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:37  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
L:39  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:60
L:41  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:120
L:43  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:180
L:45  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:240
L:47  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:300
L:49  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:360
L:51  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:420
L:53  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:480
L:55  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:540
L:57  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:600
L:72  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0
L:74  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:60
L:78  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:180
L:80  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:240
L:82  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:300
L:84  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:360
L:86  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:420
L:88  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:480
L:90  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:540
L:92  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:600
L:94  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:660
L:96  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:720
L:98  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:780
L:100 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:840
L:102 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:900
L:117 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
L:119 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:60
L:121 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:120
L:123 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:180
L:125 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:240
L:127 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:300
L:129 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:360
L:131 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:420
L:133 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:480
L:135 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:540
L:137 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:600
L:139 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:660
L:141 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:720
L:143 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:780
L:145 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:840
L:147 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:900
L:162 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
L:180 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:540
L:186 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:720
L:188 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:780
L:190 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:840
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VERIFICATION SUMMARY
PATENT APPLICATION: US/10/081,327A

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Input Set : A:\SEQUENCE 081,327.txt
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L:192 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:900
L:194 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:960
L:196 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:1020